# CITY OF SPARKS

# 2023 ALLEY REHABILITATION PROGRAM ALLEY G

PWP# WA 2023-156 BID# 22/23 - 024 JANUARY 2023

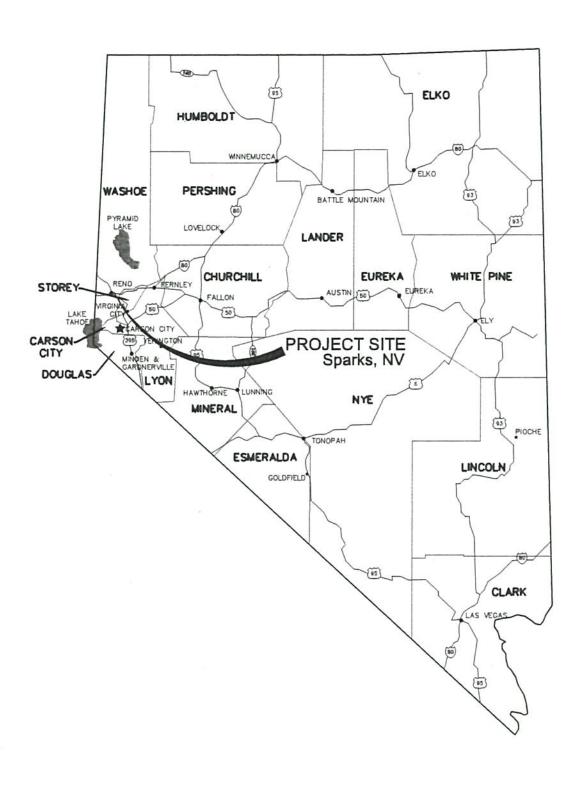


#### **SPARKS CITY COUNCIL**

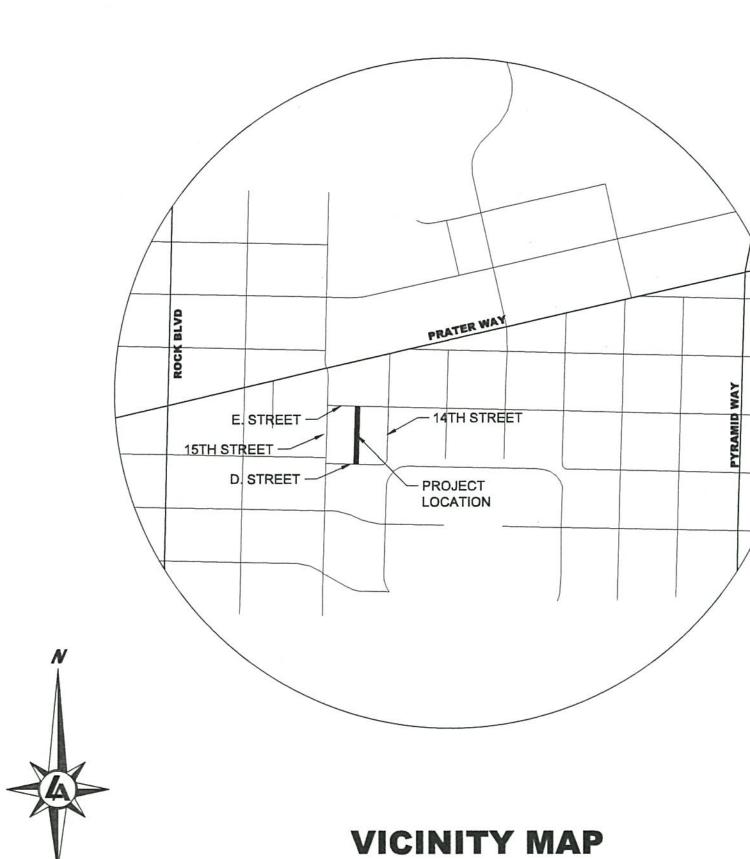
MAYOR	ED LAWSON
WARD 1	DONALD ABBOTT
WARD 2	DIAN VANDERWELL
WARD 3	PAUL ANDERSON
WARD 4	CHARLENE BYBEE
WARD 5	KRISTOPHER DAHIR

## **APPROVED BY:**

01/12/2023 DATE JON R. EFICSON, P.E., P.T.O.E.



## **LOCATION MAP**



#### **SHEET INDEX**

TITLE SHEET NOTES, ABBREVIATIONS, AND LEGEND PROJECT CONTROL SURFACE IMPROVEMENT PLAN GRADING PLAN - STA, 10+00 TO 12+00 GRADING PLAN - STA. 12+00 TO 13+50 UTILITY PLAN - STA. 10+00 TO 12+00 UTILITY PLAN - STA. 12+00 TO 13+50 D1.0 **DETAIL SHEET** 

**DETAIL SHEET DETAIL SHEET** 



#### **ENGINEER**

9222 PROTOTYPE DRIVE RENO, NEVADA 89521 TEL: 775.827.6111 INFO@LUMOSINC.COM



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REHABILITATION PROGRAM

A 2023

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CHECKED BY: JOB NO.:

CONCRETE

UTILITY POLE

-> ₽

ROCK

AC 🛛 AIR CONDITIONER AC 🛛 **ELECTRIC OUTLET** BOLLARD STORM DRAIN MANHOLE / DROP INLET **CATCH BASIN** WATER VALVE IRRIGATION CONTROL VALVE WATER METER WM 🗖

WSO

ТВ 🗖

TV

WATER SPIGOT / HOSE BIB WATER ws O MANHOLE WATER VAULT FIRE HYDRANT GAS VALVE

**GAS METER TELEPHONE MANHOLE** TELEPHONE BOX TELEPHONE VAULT TV **SEWER MANHOLE** SEWER CLEANOUT •SSCO

SURVEY MONUMENT CONTROL POINT **BARRICADE** SIGN - - - -**RETAINING WALL**  $\cdot \infty \infty \infty \circ \cdot$ -0000000 **FENCE** \_\_\_\_ X \_\_\_\_ \_\_\_\_\_ **GRADE BREAK** FLOW LINE \_\_ · · -> · · \_\_

SOIL TEST PIT (x)**DETAIL CALLOUT** CX.X COMM LINE \_\_\_\_\_ TELE \_\_\_\_\_ \_\_\_ **GAS LINE** —— GAS ——— **ELECTRIC LINE** \_\_\_\_\_ EX SS \_\_\_\_\_

- ELEC -SEWER LINE WATER LINE AIR LINE

STORM DRAIN RECLAIMED WATER LINE ---- REC WL

FOUND 5/8" REBAR AND CAP "PLS 14413" - UNLESS OTHERWISE NOTED SET 5/8" REBAR AND CAP "PLS 17616" - UNLESS OTHERWISE NOTED

FOUND SECTION CORNER AS NOTED

#### **ABBREVIATIONS**

ACP

AGG

**BOW** 

BVC

BW

CB

C&G

CL

CMP

COMP

CONC

CONTR

CP

CTV

DIA

EC

ELL

**ELEC** 

**ELEV** 

EVC

EXT

FCA

FES

FFC

FLG

FTG

GALV

GB

GD

GV

HGL

HORIZ

MAX

MDD

MMD

MUTCD

GDW

FΕ

EX, (E)

DWY

BF, BOF

BC

ASPHALT CONCRETE NORTH NAP NOT A PART ASBESTOS CEMENT PIPE NIP **AGGREGATE** NOT IN PROJECT NTS NOT TO SCALE **BEGIN CURVE (HORIZONTAL) BOTTOM OF WALL** OC ON CENTER **BOTTOM OF FOOTING** OD OUTSIDE DIAMETER OH **BUTTERFLY VALVE** OVERHEAD BEGIN VERTICAL CURVE (P) PROPOSED **PCC** BACK OF WALK PORTLAND CEMENT CONCRETE **CATCH BASIN** PG PAD GRADE CUBIC FEET PER SECOND POINT OF INTERSECTION PIVC POINT OF INTERSECTION VERTICAL CURVE CUBIC FEET CURB AND GUTTER PROPERTY LINE POCC POINT OF COMPOUND CURVATURE CENTER LINE POT POINT OF TANGENCY CLASS / CENTER LINE POWER POLE CORRUGATED METAL PIPE PRC POINT OF REVERSE CURVE COMPACTION **PRVC** POINT OF REVERSE VERTICAL CURVE CONCRETE PVC POLYVINYL CHLORIDE CONTRACTOR **PVMT** PAVEMENT CONCRETE PAD Q 5 5 YEAR PEAK FLOW CABLE TELEVISION Q 100 100 YEAR PEAK FLOW **DROP INLET** RADIUS DIAMETER RCP REINFORCED CONCRETE PIPE **DRIVEWAY** REF REFERENCE **EAST** RET **CURB RETURN EACH** RADIUS POINT **END CURVE (HORIZONTAL) RIGHT ELBOW** R/W, ROW RIGHT-OF-WAY **ELECTRICAL** SLOPE ELEVATION SOUTH END VERTICAL CURVE SD STORM DRAIN EXISTING **SDMH** STORM DRAIN MANHOLE **EXTERIOR** STREET LIGHT FLANGE COUPLING ADAPTER SS SANITARY SEWER FINISH ELEVATION SSCO SANITARY SEWER CLEAN OUT FLARED END SECTION SSMH SANITARY SEWER MANHOLE FINISH FLOOR **SSPWC** STANDARD SPEC. FOR PUBLIC WORKS FRONT FACE OF CURB CONSTRUCTION FINISH GRADE STA STATION FIRE HYDRANT SW SIDEWALK FLOW LINE TELE TELEPHONE FLANGE TBO TEMPORARY BLOW OFF VALVE FEET PER SECOND TC TOP OF CURB, TOP OF CONC FOOTING TG TO GRADE GAS TOB TOP OF BERM GALVANIZED TF, TOP TOP OF FOOTING GRADE BREAK TOW TOP OF WALL GRAVEL DRIVEWAY TS TRAFFIC SIGNAL GROUND **TSCB** TRAFFIC CONTROL SIGNAL BOX **GATE VALVE** TR TOP OF RAIL **HANDICAPPED TRANS** TRANSITION HYDRAULIC GRADE LINE TYP TYPICAL HORIZONTAL UG/P UNDER GROUND POWER HIGH POINT UNO UNLESS NOTED OTHERWISE **INSIDE DIAMETER V**5 VELOCITY AT 5 YEAR PEAK **INVERT ELEVATION** VC VERTICAL CURVE INTERSECTION VEL VELOCITY **IRRIGATION VERT** VERTICAL LATERAL VG VALLEY GUTTER LINEAR FEET WEST **LOW POINT** W/G WATER AND GAS I FFT WATER LINE MAXIMUM WM WATER METER MAXIMUM DRY DENSITY WS WATER SURFACE MANHOLE WATER VALVE MINIMUM WELDED WIRE FABRIC MECHANICAL JOINT YR YEAR MAXIMUM MARSHALL DENSITY MANUAL FOR TRAFFIC CONTROL DEVICES

# Know what's below. Call before you dig.

#### **NOTES:**

1. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2012 EDITION REVISION 8, 10-19-2018.

**GENERAL** 

- 2. THE CONTRACTOR SHALL REFER TO THE STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, AS ADOPTED BY THE CITY OF SPARKS, FOR ALL DETAILING NOT SHOWN ON THESE PLANS.
- 3. CONSTRUCTION SHALL COMPLY WITH THESE PLANS AND SPECIFICATIONS AND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
- 4. THE CITY OF SPARKS SHALL BE RESPONSIBLE FOR ARRANGING A PRE-CONSTRUCTION JOB SITE CONFERENCE WITH GOVERNING AGENCIES, ALL UTILITY COMPANIES, OWNER'S REPRESENTATIVES, AND THE PROJECT ENGINEER PRIOR TO COMMENCING WORK. THIS MEETING SHALL BE HELD AT LEAST FORTY-EIGHT (48) HOURS, OR TWO (2) BUSINESS DAYS, PRIOR TO THE START OF CONSTRUCTION AND SHALL COMMUNICATE SCHEDULES, CONTRACTORS MEAN AND
- WITH THE CONSTRUCTION OF THE PROJECT. ALL WORK EITHER DIRECTLY OR INDIRECTLY RELATED TO THE PROJECT SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY SYSTEM MANAGER.
- THE CONTRACTOR SHALL MAINTAIN AN ONSITE RECORD COPY OF ALL DRAWINGS. SPECIFICATIONS, ADDENDA, CHANGE ORDERS, WORK CHANGE DIRECTIVES, FIELD ORDERS, FIELD CHANGES, AND WRITTEN INTERPRETATIONS AND CLARIFICATIONS RECORDS SHALL BE IN GOOD ORDER AND ANNOTATED TO SHOW CHANGES MADE DURING CONSTRUCTION.

METHODS, MATERIALS TO BE USED, AND OTHER RELEVANT MATTERS ASSOCIATED

- 7. CONTRACTOR SHALL REFER TO THE PROJECT SPECIFICATIONS REGARDING MATERIAL AND EQUIPMENT SUBMITTAL REQUIREMENTS.
- 8. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT AT 1-800-642-2444 TO PROVIDE FIELD LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION.
- THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY PROPOSED POINTS OF CONNECTION AND IN AREAS OF POSSIBLE CONFLICT WITH NEW UTILITY INSTALLATION PRIOR TO BEGINNING CONSTRUCTION. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES BETWEEN THE CONDITIONS EXISTING IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT AND MAINTAIN ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THE PLAN.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROCURE ALL NECESSARY PERMITS LICENSES, INSURANCE POLICIES, ETC. AS MAY BE NECESSARY TO COMPLY WITH LOCAL, COUNTY, STATE, AND FEDERAL LAWS ASSOCIATED WITH THE PERFORMANCE OF THE WORK; UNLESS OTHERWISE OBTAINED BY THE OWNER
- 11. CONTRACTOR SHALL REFER TO THE PROJECT SPECIFICATIONS REGARDING PROJECT TRAFFIC CONTROL REQUIREMENTS. ALL TRAFFIC CONTROL PLANS SHALL BE PREPARED BY ATTSA CERTIFIED PERSONNEL
- 12. THE CONTRACTOR AGREES TO ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, AND FURTHER AGREES THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS IN ACCORDANCE WITH THE PROVISIONS OUTLINED BY THE PROJECT CONTROL AND THE STANDARD SPECIFICATIONS
- 13. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA AND NRS CHAPTER 618.
- 14. THE CONTRACTOR SHALL PURSUE THE WORK IN A CONTINUOUS AND DILIGENT MANNER, CONFORMING TO ALL THE PERTINENT SAFETY REGULATIONS TO ENSURE A TIMELY COMPLETION OF THE PROJECT.
- 15. THE CONTRACTOR SHALL MAINTAIN A CLEAN PROJECT SITE, REMOVING CONSTRUCTION DEBRIS AT THE END OF EACH ACTIVITY DAY. THE CONTRACTOR SHALL MAINTAIN DEBRIS FREE CONSTRUCTION ROUTES, ADJACENT STREETS AND STORM DRAIN SYSTEMS.
- TEMPORARY CONSTRUCTION FENCING SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT IN AREAS AS DELINEATED ON THE PLANS OR AS DIRECTED BY THE PROJECT ENGINEER. THE TEMPORARY FENCING SHALL PREVENT CHILDREN AND PETS FROM ENTERING THE CONSTRUCTION AREA, CREATE A VISUAL BARRIER OF THE CONSTRUCTION ACTIVITIES FROM THE ADJACENT RESIDENCE AND YARDS, AND PROTECT VEGETATION FROM CONSTRUCTION EQUIPMENT
- 17. THE CONTRACTOR SHALL USE ONLY AUTHORIZED SITES FOR STORAGE OF EQUIPMENT AND MATERIALS AND OBTAIN PROPER APPROVALS FROM THE LAND OWNER AND LOCAL GOVERNING AUTHORITY TO DO SO. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF ALL EQUIPMENT AND MATERIALS.
- 18. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION. IN THE EVENT A MONUMENT IS DISTURBED, THE CONTRACTOR SHALL HAVE THE MONUMENT REPLACED, AT HIS OWN EXPENSE, BY A LICENSED SURVEYOR IN THE STATE OF NEVADA.
- 19. CONTRACTOR SHALL REFER TO THE PROJECT SPECIFICATIONS REGARDING CONSTRUCTION HOURS.
- 20. ALL FIELD CHANGES MUST BE PRE-APPROVED BY THE CITY OF SPARKS.
- 21. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
- 22. THE OWNER IS RESPONSIBLE FOR FURNISHING QUALIFIED SITE INSPECTIONS AS REQUIRED TO COMPLY WITH LOCAL ORDINANCES 23. A GEOTECHNICAL INVESTIGATION WAS PERFORMED ON THIS PROJECT. ALL
- RECOMMENDATIONS INCLUDED IN THE REPORT ARE HEREBY MADE A PART OF THE CONSTRUCTION DOCUMENTS UNLESS MODIFIED WITHIN THESE PLANS. INSPECTION AND TESTING DURING CONSTRUCTION SHALL BE REQUIRED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED WITHIN THE REPORT.

TITLE: GEOTECHNICAL INVESTIGATION REPORT - ALLEY G DESIGN DATE: JUNE 2022

FIRM: LUMOS & ASSOCIATES, INC.

#### UNDERGROUND UTILITIES

- 24. THE CONTRACTOR SHALL FIELD VERIFY UTILITY LOCATIONS NEAR OR WITHIN THE CONSTRUCTION LIMITS WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ARRANGE FOR THE NECESSARY RELOCATION OF ANY UTILITY. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES INVOLVED AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING WORK.
- 25. NO OTHER UTILITIES MAY BE PLACED IN A WATER OR SEWER TRENCH.
- ALL VALVE BOXES, MANHOLE STRUCTURES, AND CLEAN OUTS SHALL BE MARKED AND ACCESSIBLE AT ALL TIMES.
- 27. CONTRACTOR SHALL SUPPORT TRENCH SIDEWALLS IN ACCORDANCE WITH ALL APPLICABLE LAWS AND GOVERNING SAFETY REGULATIONS. SHEETING OR SHORING SHALL CONFORM TO LOCAL REGULATIONS AND OSHA STANDARDS.
- 28. ENDS OF UNFINISHED PIPE SHALL BE SEALED AT THE END OF EACH DAY 29. PIPE SHALL BE LAID IN THE UPHILL DIRECTION, WITH BELL ENDS UPHILL.

#### **GRADING, EXCAVATION & SURFACE IMPROVEMENTS**

- THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING THEIR OWN QUANTITY TAKE-OFF AND SHALL BUDGET THE PROJECT ACCORDINGLY. ALL EXCESS GRADING MATERIALS SHALL BE DISPOSED OF OFFSITE
- 31. ALL EARTHWORK ACTIVITIES SHALL BE IN ACCORDANCE WITH THE PROJECT'S GEOTECHNICAL REPORT.
- 32. THE SOILS ENGINEER SHALL APPROVE ALL EARTHWORK AND GRADING TO CONFIRM COMPACTION REQUIREMENTS ARE MET.
- 33. CONTRACTOR SHALL PROTECT EXISTING PAVING, CONCRETE, LANDSCAPING, FENCING, MAILBOXES, SIGNS AND ANY OTHER IMPROVEMENTS NOT SPECIFICALLY CALLED OUT FOR REPLACEMENT. CONTRACTOR SHALL REPAIR/REPLACE ANYTHING DAMAGED BY FORCES UNDER THEIR EMPLOY OR CONTRACT
- 34. ALL ASPHALT CONCRETE SURFACES SHALL BE SAWCUT TWO FEET MINIMUM INSIDE THE EDGE OF PAVEMENT TO A NEAT, STRAIGHT LINE AND REMOVED. THE EXPOSED PAVEMENT TIE-IN EDGES SHALL BE METICULOUSLY CLEANED OF ALL LOOSE MATERIAL AND THEN TREATED WITH BITUMINOUS EMULSION PRIOR TO PAVING. THE EXPOSED BASE MATERIALS SHALL BE GRADED AND RECOMPACTED PRIOR TO PAVING.

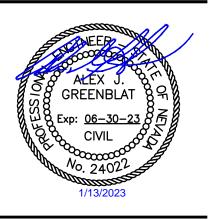
#### ENVIRONMENTAL

- 35. ALL CONSTRUCTION SHALL BE PERFORMED IN COMPLIANCE WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES). CONTRACTOR IS RESPONSIBLE FOR ACQUIRING AND MAINTAINING A SWPPP
- 36. INSTALLATION AND MAINTENANCE OF EROSION CONTROL MEASURES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION OF EROSION AND SILTATION FROM ENTERING THE STORM DRAIN SYSTEM, NATURAL DRAINAGE COURSES, AND/OR INTRUDING UPON ADJACENT ROADWAYS AND PROPERTIES. EROSION CONTROL MEASURES SHOWN ON THESE PLANS ARE INTENDED AS A GUIDE. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS DETERMINED IN THE FIELD. THIS RESPONSIBILITY SHALL APPLY THROUGHOUT THE COURSE OF CONSTRUCTION AND UNTIL ALL DISTURBED AREAS HAVE BECOME STABILIZED AND SHALL NOT BE LIMITED TO WET WEATHER PERIODS. THE CONTRACTOR IS RESPONSIBLE FOR SWPPP UPDATES.
- 37. THE CONTRACTOR SHALL MAINTAIN AN ON-GOING DUST CONTROL PROGRAM INCLUDING WATERING OF OPEN AREAS, TO CONFORM WITH THE LATEST FEDERAL, STATE, AND COUNTY AIR POLLUTION REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND UPDATING DUST CONTROL PERMITS FOR THE PROJECT.
- 38. PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS SHALL BE USED TO PROTECT ADJOINING PROPERTIES DURING CONSTRUCTION OF IMPROVEMENTS.
- 39. AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM CHECK BERMS AND DESILTING FACILITIES. GRADED SLOPE SURFACE PROTECTION MEASURES DAMAGED DURING THE RAINSTORM SHALL ALSO BE REPAIRED.
- 40. IF GROUNDWATER IS ENCOUNTERED, THE CONTRACTOR SHALL STOP WORK IMMEDIATELY, PREPARE A DEWATERING PLAN, AND OBTAIN APPROVAL FROM THE PROJECT ENGINEER BEFORE PROCEEDING WITH WORK. DEWATERING ACTIVITIES MAY REQUIRE THE CONTRACTOR TO OBTAIN A DISCHARGE/PUMPING PERMIT FROM THE STATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SUCH PERMITS.
- 41. ALL STREETS SHALL BE MAINTAINED FREE OF DUST AND MUD CAUSED BY GRADING OPERATIONS.

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DRAWN BY: MEP / TDA **DESIGNED BY:** CHECKED BY: JOB NO.:

AJG 10687.001

#### **BASIS OF BEARINGS**

THE BASIS OF BEARINGS FOR THIS SURVEY IS NEVADA STATE PLANE COORDINATE SYSTEM, WEST ZONE NAD83(94) BASED UPON REAL TIME KINEMATIC GPS OBSERVATIONS, OBSERVED 6-9-2021 USING A SURVEY GRADE DUAL FREQUENCY GPS RECEIVER FROM THE WASHOE COUNTY CONTROL NETWORK MODIFIED BY A COMBINED FACTOR OF 1.000197939, SCALED FROM 0.00N ,0.00E AND CONVERTED TO U.S. SURVEY FEET. ALL DIMENSIONS ON THIS MAP ARE GROUND DISTANCES.

#### **BASIS OF ELEVATIONS**

DATUM: NAVD 88
PROJECT BENCHMARK = USC&G BM #G374
HAVING AN ELEVATION OF 4426.65'

## **PROJECT CONTROL**

POINT	NORTH	EAST	ELEVATION	DESCRIPTION
502	14871596.54	2292696.77	4425.11	CP 5/8 R/C CONTROL
503	14871937.12	2293837.04	4418.04	CP 2.5" BRASS CAP
504	14871593.75	2293109.42	4422.25	CP 2.5" BRASS CAP



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REHABILITATION ALLEY G

**PROGRAM** 

2023

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DRAWN BY: DESIGNED BY: CHECKED BY: 10687.001 JOB NO.:

22x34 SHEETS: 1" = 20' 11x17 SHEETS: 1" = 40'

#### SURFACE IMPROVEMENT NOTES

- A. SURFACE RESTORATION LIMITS ARE ESTIMATED AS SHOWN AND SHALL NOT BE CONSIDERED A MAXIMUM OR MINIMUM AREA. CONTRACTOR SHALL EVALUATE CONSTRUCTION METHODS, DESIGN DETAILS, EQUIPMENTS, SOILS, AND OTHER CONDITIONS TO DETERMINE QUANTITIES.
- PROTECT ALL EXISTING STRUCTURES, TREES, UTILITIES, FENCING, BOXES, POLE, ETC. IN PLACE UNLESS NOTED OTHERWISE. IF DAMAGE IS CAUSE BY CONTRACTOR, THEN IT SHALL BE REPLACED AT NO DIRECT PAYMENT.
- C. UNLESS OTHERWISE NOTED, PROTECT AND ADJUST ALL EXISTING UTILITY MANHOLE FRAME AND COVER, VALVE BOXES, AND VAULT COVERS TO NEW FINISH GRADE WITHIN IMPROVEMENT LIMITS.

D. PAVEMENT PATCHING SHALL MATCH EXISTING THICKNESS, BUT SHALL BE NO

- MORE THAN 6" AND NO LESS THAN 4". REFER TO PATCHING DETAIL ON SHEET
- REFERENCE GEOTECHNICAL REPORT AND DETAILS C100 / D1.0 FOR ALLEY SECTION DETAILS AND EXISTING ALLEY SECTION CONDITIONS.
- EXPANSION JIONTS SHALL BE LOCATED AT ALL INTERFACES OF PCC PAVEMENT WITH PCC CURB, MANHOLES/CATCH BASINS, AND POLES. SEE DETAIL C303 / D1.2.
- G. REFERENCE MUTCD 2009, FIGURE 3B-22 FOR ACCESSIBILITY PARKING SPACE MARKING SPECIFICATIONS.

#### LEGEND:

REMOVE AND REPLACE PCC REMOVE AND REPLACE

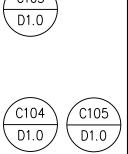
> **SIDEWALK** REMOVE AND REPLACE PCC

**DRIVEWAY TRANSITION** PERMANENT ASPHALT PATCH

REMOVE AND REPLACE LANDSCAPE PAVERS

> INSTALL POST CURB OR REINFORCED RETAINING CURB

REMOVE AND REPLACE EXISTING CHAIN LINK GATE \_\_\_\_ x \_\_\_ x \_\_\_ **FENCE** 



D1.0 /

∕S-103\

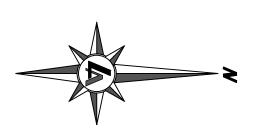
\ D1.0 /

C102 \

\ D1.0 /

**SURFACE IMPROVEMENT QUANTITIES** 

NO.	DESCRIPTION	UNIT	QUANTIT
1	REMOVE & REPLACE PCC ALLEY	SF	6180
2	REMOVE & REPLACE PCC SIDEWALK	SF	101
3	REMOVE & REPLACE PCC DRIVEWAY TRANSITION	SF	420
4	PERMANENT ASPHALT PATCH	SF	1334
4	REMOVE & REPLACE LANDSCAPE PAVERS	SF	40
5	INSTALL PCC POST CURB	LF	4
6	INSTALL PCC REINFORCED RETAINING CURB	LF	18
7	ADJUST NEW CATCH BASIN TO FINISH GRADE WITH NEW FRAME AND COVER	EA	1
8	INSTALL PREFORMED THERMOPLASTIC ADA PARKING STALL PAVEMENT MARKING	EA	1
9	INSTALL "COMPACT" SPOT PAINT STENCILS	EA	7
10	PAVEMENT MARKING 4" SINGLE WHITE PAINT	LF	130
11	REMOVE AND REPLACE 4" BOLLARD	EA	8
12	INSTALL NEW 4" BOLLARD	EA	8
13	REMOVE AND REPLACE 4' CHAIN LINK FENCE / GATE	LF	52
15	REMOVE AND REPLACE 6' CHAIN LINK PRIVACY FENCE / GATE	LF	91



22x34 SHEETS: 1" = 10' 11x17 SHEETS: 1" = 20'

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D1.2 /

**HABILITATIO** O 2023

GR

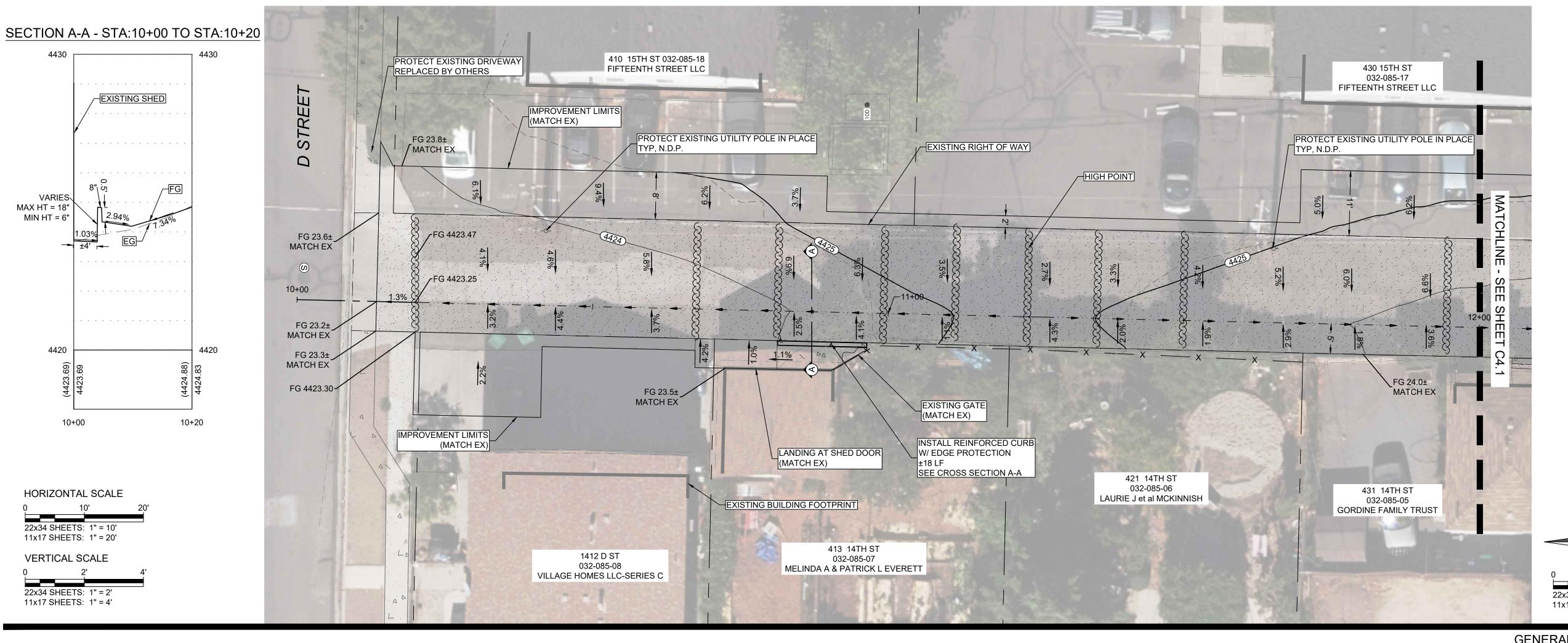
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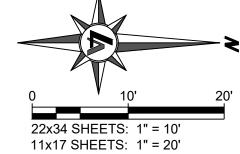
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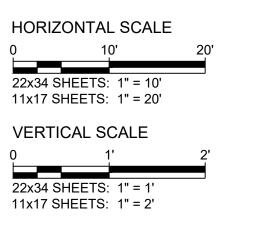




**GENERAL NOTES:** 

#### ALLEY G FL - STA:10+00 TO STA:12+00 HIGH POINT -STA:11+23.52 STA:11+11.02 STA:11+35.01 ELEV:4425.10 ELEV:4425.00 ELEV:4425.00 STA:10+99.12 STA:11+50.00 ELEV:4424.78 ELEV:4424.70 0.86% STA:10+81.32 ELEV:4423.90 STA:10+67.40 ELEV:4423.48 STA:11+94.65 ELEV:4423.59 4423 STA:10+13.45 STA:10+20.00 ELEV:4423.16 ELEV:4423.25 4422 10+00 11+00 11+50 12+00

- EXPANSION JOINTS SHALL BE LOCATED AT ALL INTERFACES OF PCC PAVEMENT WITH PCC CURB, MANHOLES/CATCH BASINS, AND POLES. SEE DETAIL C303 / D1.2
- SITE GRADING SHALL BE CONSIDERED AS PART OF REMOVAL AND REPLACEMENT OF THE ALLEYWAY SECTION. REFER TO GEOTECHNICAL REPORT FOR OVER-EXCAVATION GUIDELINES.
- REINFORCE PCC ADJACENT TO MANHOLES, UTILITY POLES, CATCH BASINS, VALVES, ETC. PER DETAIL C102 / D1.2.
- LANDSCAPING DOES NOT INCLUDE FENCING. FENCING IS PAID FOR AS SPECIFIED IN BID ITEM CLARIFICATIONS. PROTECT ALL EXISTING FENCING IN PLACE UNLESS NOTED OTHERWISE ON PLANS.
- BUSHES AND TREES SHALL BE TRIMMED OR REMOVED AS NECESSARY FOR CONSTRUCTION BY AN ISA CERTIFIED ARBORIST. NO DIRECT PAYMENT FOR THIS WORK
- 6. FOR UTILITY IMPROVEMENTS REFER TO SHEET C5.0 AND C5.1.



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NOT FOR CONSTRUCTION

9222 PROTOTYPE DRIVE

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**PROGRAM** 

REHABILITATION ALLEY G

2023

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RADIN

RENO, NV 89521 TEL: 775.827.6111

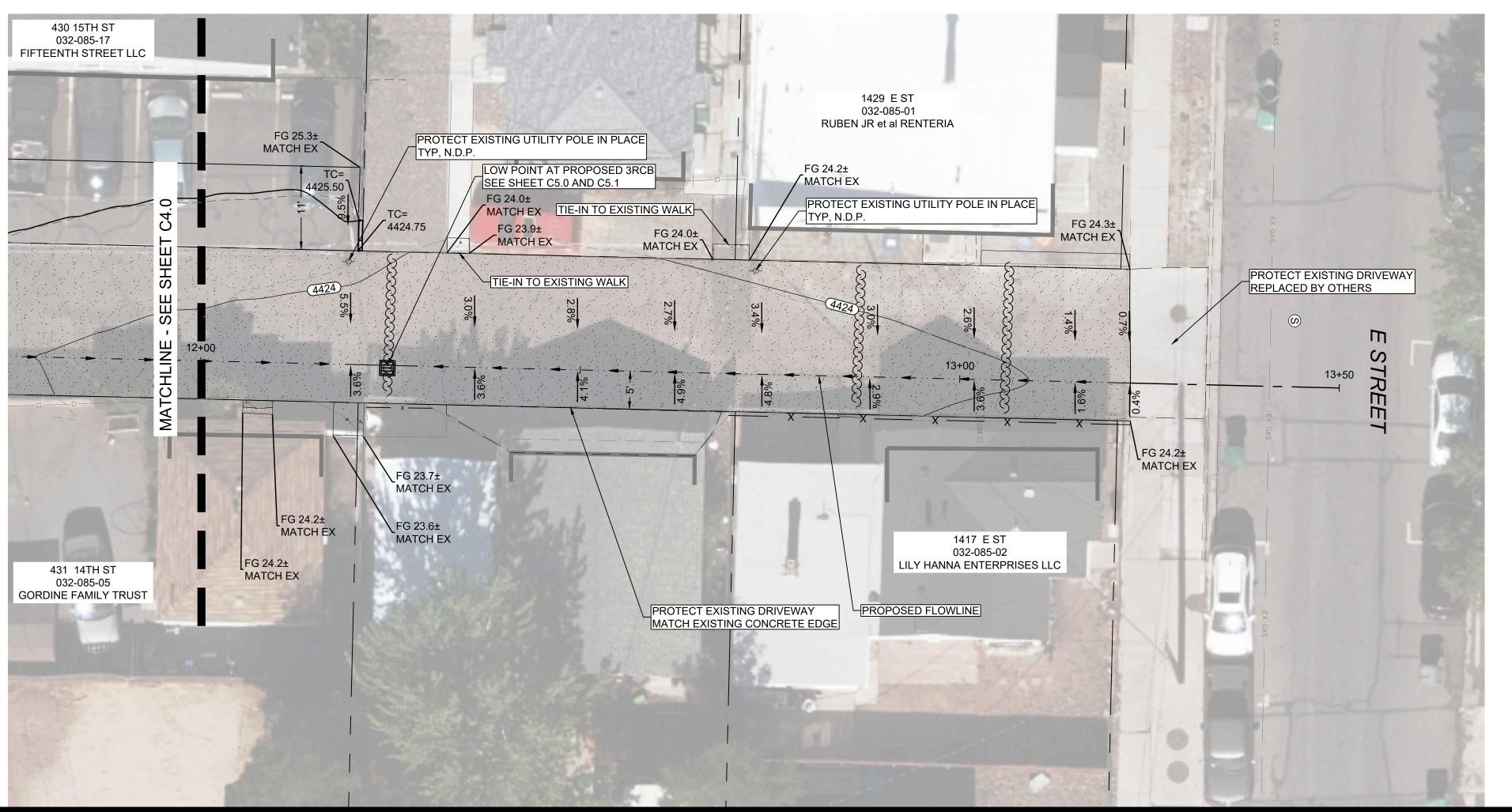
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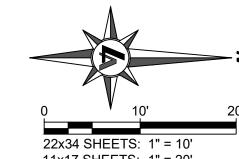
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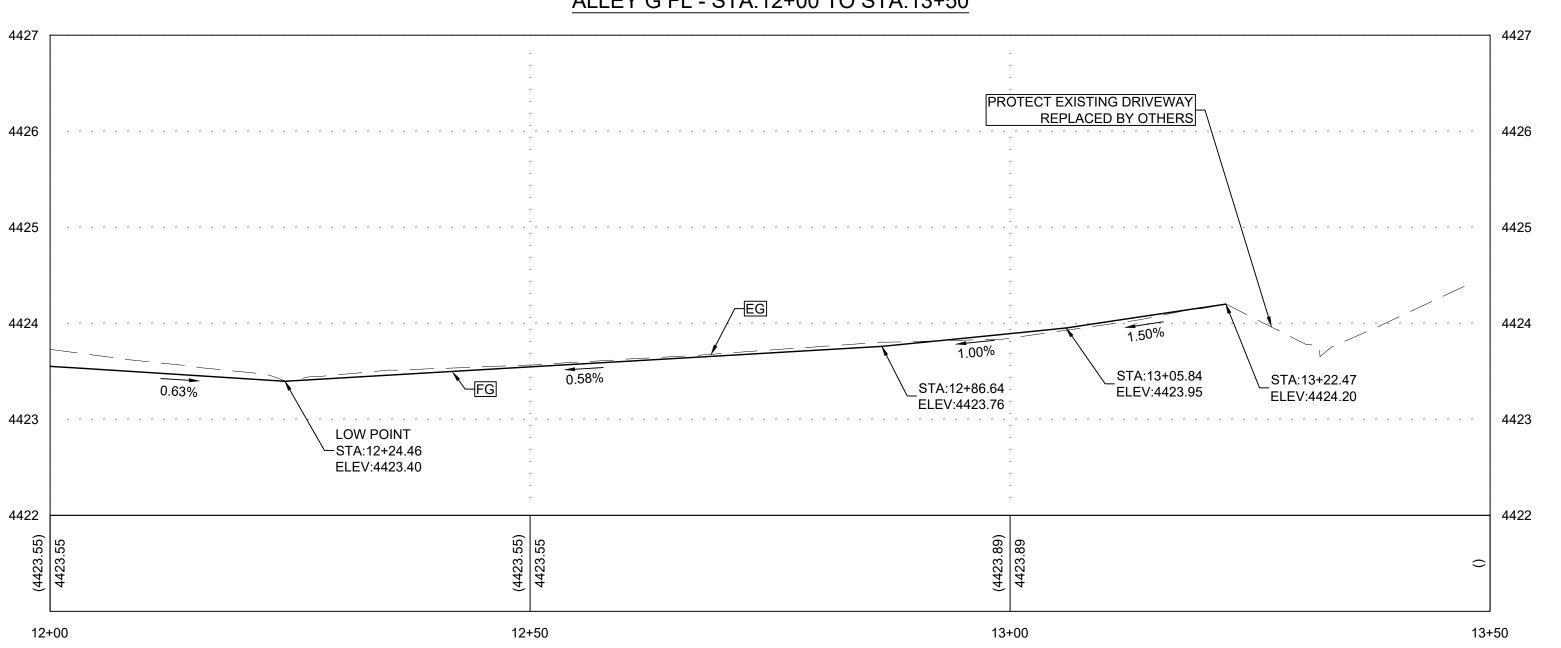
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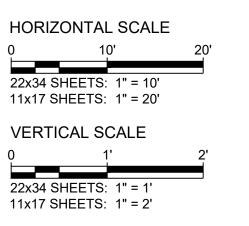
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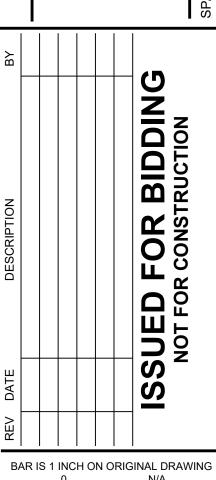
ALLEY G FL - STA:12+00 TO STA:13+50



# 11x17 SHEETS: 1" = 20'

- EXPANSION JOINTS SHALL BE LOCATED AT ALL INTERFACES OF PCC PAVEMENT WITH PCC CURB, MANHOLES/CATCH BASINS, AND POLES. SEE DETAIL C303 / D1.2
- 2. SITE GRADING SHALL BE CONSIDERED AS PART OF REMOVAL AND REPLACEMENT OF THE ALLEYWAY SECTION. REFER TO GEOTECHNICAL REPORT FOR OVER-EXCAVATION GUIDELINES.
- 3. REINFORCE PCC ADJACENT TO MANHOLES, UTILITY POLES, CATCH BASINS, VALVES, ETC. PER DETAIL C102 / D1.2.
- 4. LANDSCAPING DOES NOT INCLUDE FENCING. FENCING IS PAID FOR AS SPECIFIED IN BID ITEM CLARIFICATIONS. PROTECT ALL EXISTING FENCING IN PLACE UNLESS NOTED OTHERWISE ON PLANS.
- 5. BUSHES AND TREES SHALL BE TRIMMED OR REMOVED AS NECESSARY FOR CONSTRUCTION BY AN ISA CERTIFIED ARBORIST. NO DIRECT PAYMENT FOR THIS WORK.
- 6. FOR UTILITY IMPROVEMENTS REFER TO SHEET C5.0 AND C5.1.





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REHABILITATION ALLEY G

2023

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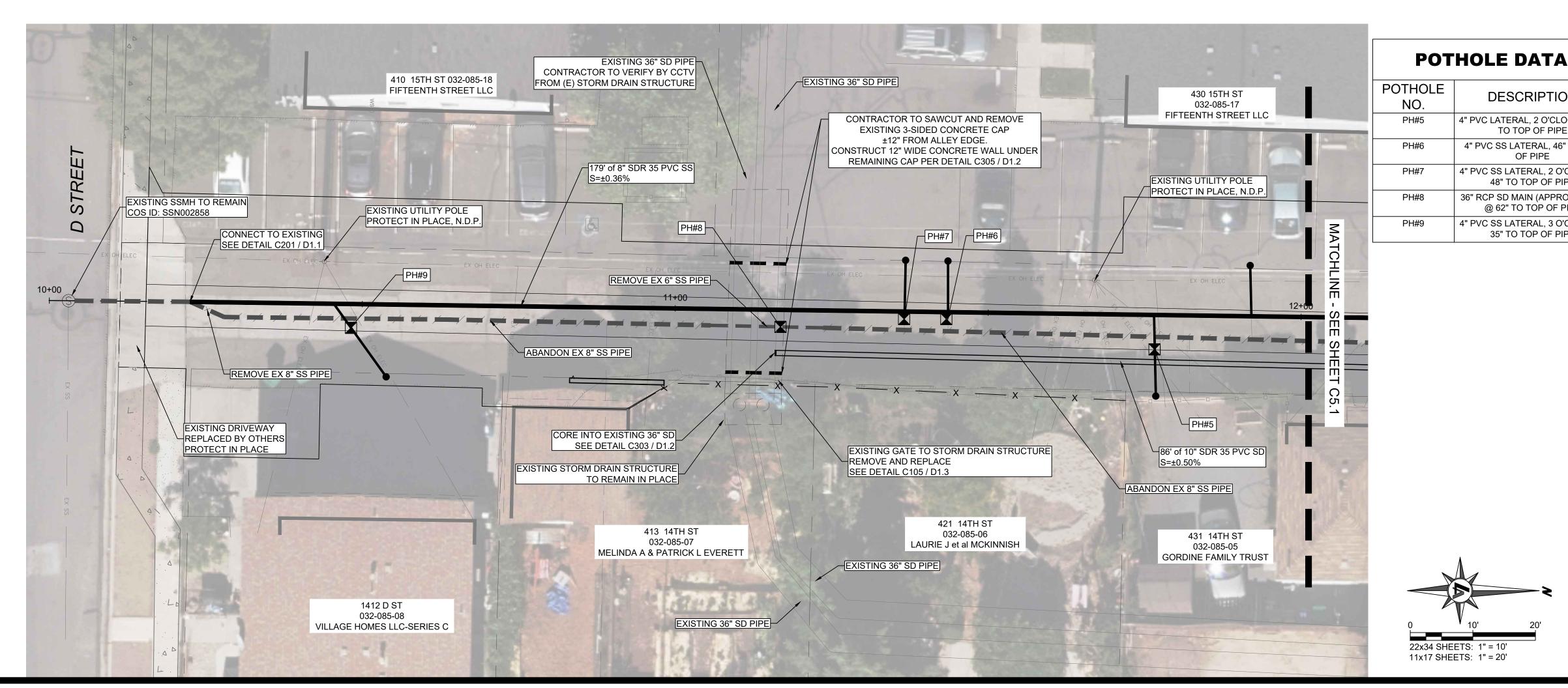
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ALLEY G UTILITY - STA:10+00 TO STA:12+00

11+00

REMOVE ±16 LF EX 6" SS PIPE

SEE DETAIL C303 / D1.2

CORE INTO EXISTING 36" SD PIPE

-ABANDON ±75 LF EX 8" SS PIPE

S=±0.36%

86' of 10" SDR 35 PVC SD-

S=±0.50%

INSTALL 179' of 8" SDR 35 PVC SS

4420

12+00

CONNECT TO EXISTING PIPE

WITH FERNCO AND CONCRETE PILLOW

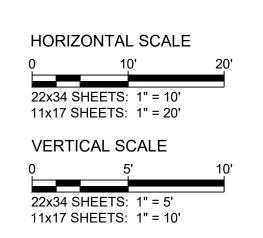
ABANDON ±72 LF EX 8" SS PIPE

EXISTING 3-SIDED CONCRETE BOX

SEE PLAN VIEW FOR SAWCUT LIMITS

#### UTILITY NOTES:

- 1. PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR. NOTE THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND FEATURES SHOWN ON THESE PLANS ARE APPROXIMATE AND NOT TO BE RELIED ON AS EXACT OR COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO POTHOLE AND VERIFY THE LOCATIONS AND DEPTH OF EXISTING UTILITY CROSSINGS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY POTENTIAL CONFLICTS PRIOR TO INSTALLATION OF STORM DRAIN AND SANITARY SEWER.
- 2. CONTRACTOR TO VERIFY ALL SEWER LATERALS BY DYE, SMOKE, PUSH CAMERA, ETC. AND RECONNECT ALL ACTIVE LATERALS AND INSTALL SANITARY SEWER CLEANOUT PER DETAIL C202 / D1.1.
- 3. CONTRACTOR TO SETUP MEANS OF BYPASS PUMPING FOR EXISTING FLOWS DURING INSTALLATION OF PROPOSED SANITARY SEWER.
- 4. CONTRACTOR TO USE STORM DRAIN INLET PROTECTION IN AND/OR AROUND ALL STORM DRAIN MANHOLES AND CATCH BASINS.
- 5. CONTRACTOR TO VERIFY EXISTING STORM DRAIN FACILITIES AND CORE INTO EXISTING 36" STORM DRAIN PIPE PER DETAIL C-300 / D1.2.
- 6. ALL PIPES TO BE ABANDONED IN-PLACE SHALL BE FILLED BY PRESSURE GROUTING PER DETAIL C306 / D1.2.



9222 PROTOTYPE DRIVE RENO, NV 89521 TEL: 775.827.6111

**DESCRIPTION** 

4" PVC LATERAL, 2 O'CLOCK @ 34"

TO TOP OF PIPE

4" PVC SS LATERAL, 46" TO TOP

OF PIPE

4" PVC SS LATERAL, 2 O'CLOCK @

48" TO TOP OF PIPE

36" RCP SD MAIN (APPROXIMATE)

@ 62" TO TOP OF PIPE

4" PVC SS LATERAL, 3 O'CLOCK @

35" TO TOP OF PIPE

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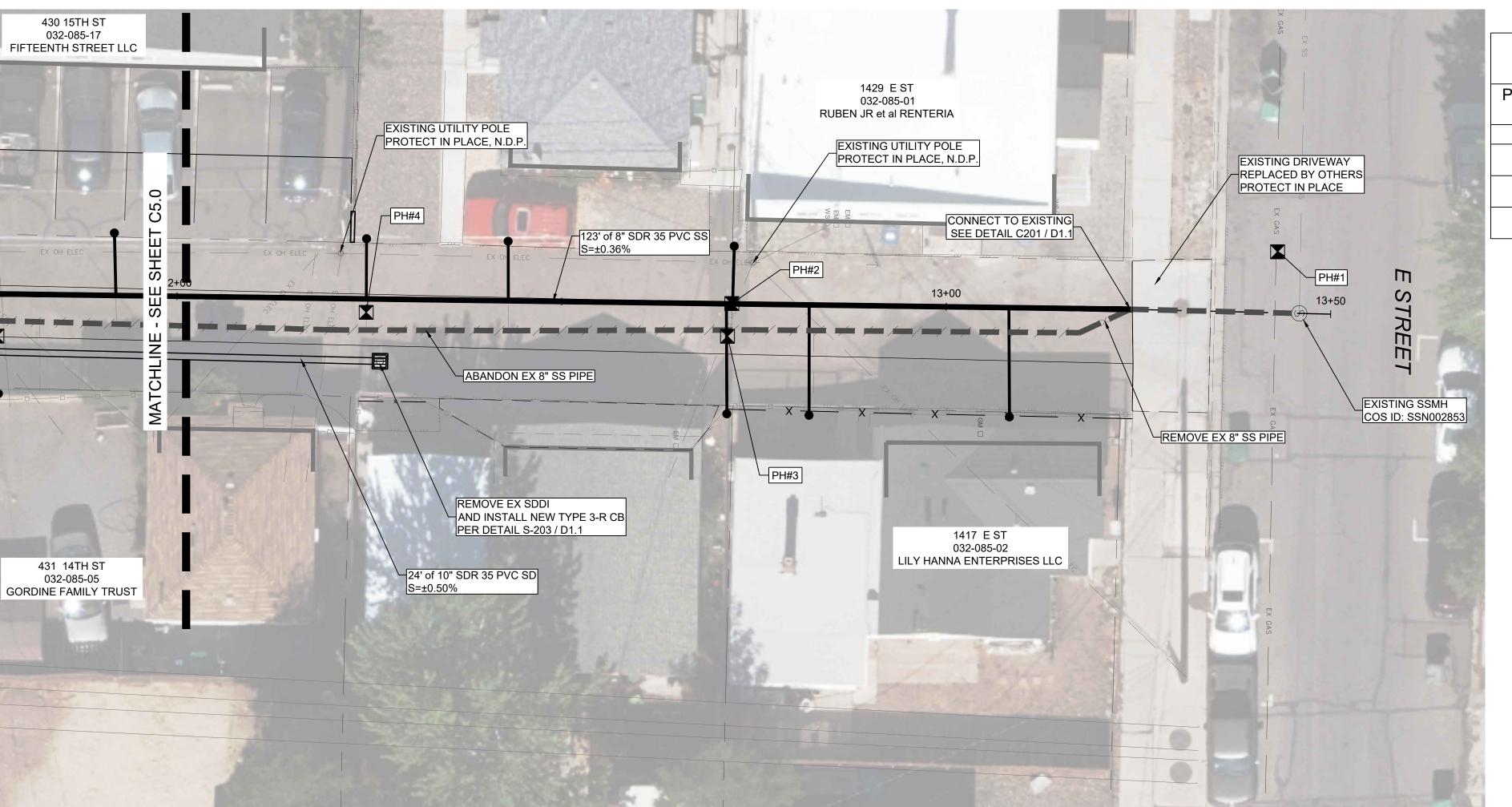
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**C5.0** 

MEP / TDA DRAWN BY: DESIGNED BY: TDA CHECKED BY: AJG JOB NO.: 10687.001

10+00





POTHOLE NO.	DESCRIPTION
PH #1	2" GAS LINE @ 42" TO TOP OF PIPE
PH#2	4" PVC SS LATERAL, 3 O'CLOCK @ 25.5" TO TOP OF PIPE
PH#3	4" PVC SS LATERAL, 2 O'CLOCK @ 23" TO TOP OF PIPE
PH#4	4" PVC SS LATERAL @ 26" TO TOP OF PIPE



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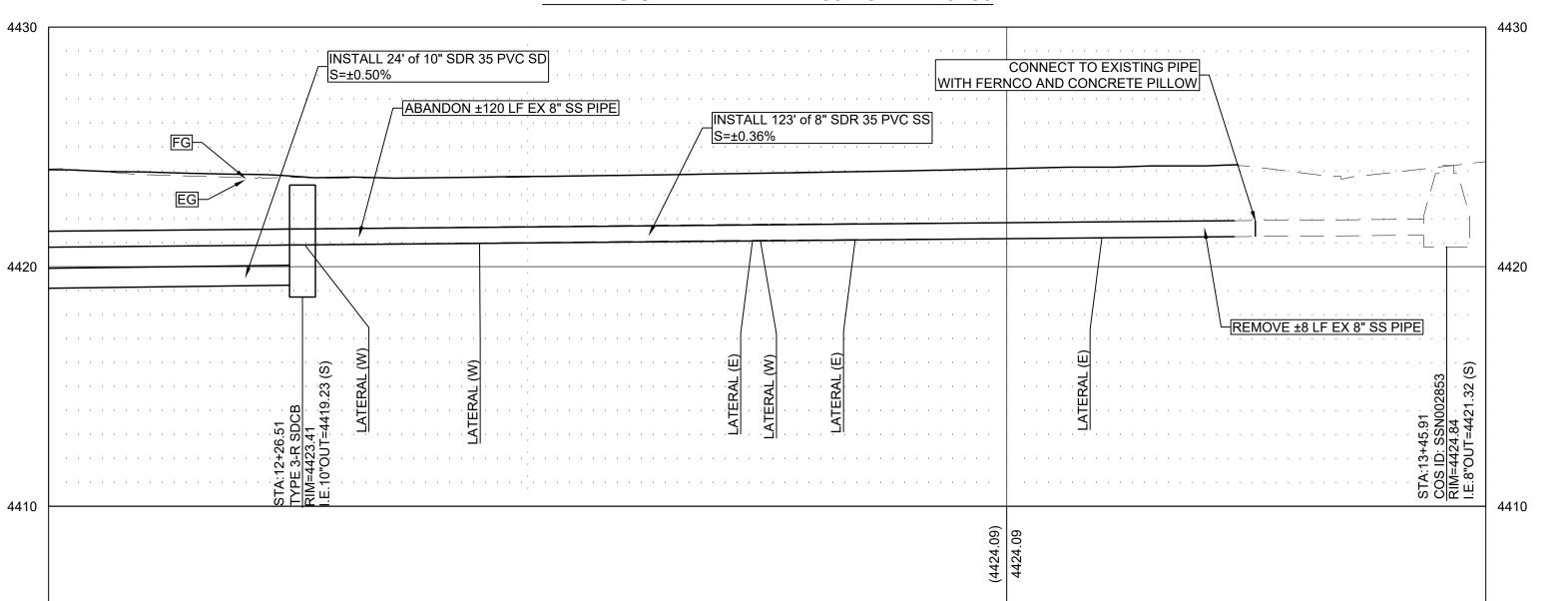
MEP / TDA DRAWN BY: DESIGNED BY: CHECKED BY:

JOB NO.:

22x34 SHEETS: 1" = 10' 11x17 SHEETS: 1" = 20'

22x34 SHEETS: 1" = 5' 11x17 SHEETS: 1" = 10'

#### ALLEY G UTILITY - STA:12+00 TO STA:13+50



13+00

#### **UTILITY NOTES:**

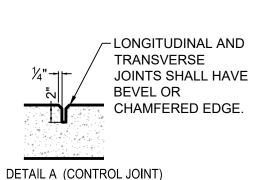
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22x34 SHEETS: 1" = 10' 11x17 SHEETS: 1" = 20'

- 2. CONTRACTOR TO VERIFY ALL SEWER LATERALS BY DYE, SMOKE, PUSH CAMERA, ETC. AND RECONNECT ALL ACTIVE LATERALS AND INSTALL SANITARY SEWER CLEANOUT PER DETAIL C202 / D1.1.
- 3. CONTRACTOR TO SETUP MEANS OF BYPASS PUMPING FOR EXISTING FLOWS DURING INSTALLATION OF PROPOSED SANITARY SEWER.
- 4. CONTRACTOR TO USE STORM DRAIN INLET PROTECTION IN AND/OR AROUND ALL STORM DRAIN MANHOLES AND CATCH BASINS.
- 5. CONTRACTOR TO VERIFY EXISTING STORM DRAIN FACILITIES AND CORE INTO EXISTING 36" STORM DRAIN PIPE PER DETAIL C-300 / D1.2.
- 6. ALL PIPES TO BE ABANDONED IN-PLACE SHALL BE FILLED BY PRESSURE GROUTING PER DETAIL C306 / D1.2.

HORIZONTAL SCALE

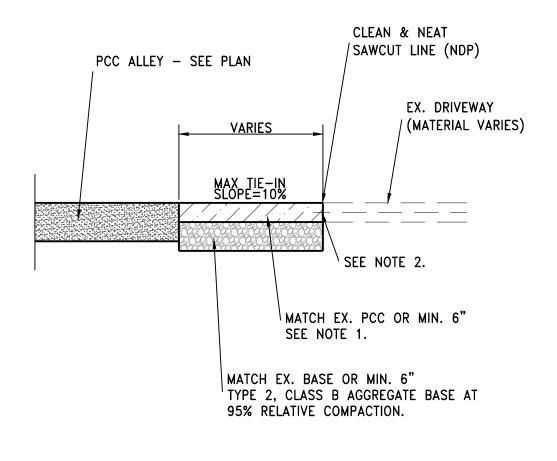
VERTICAL SCALE



**COMPACTION** 

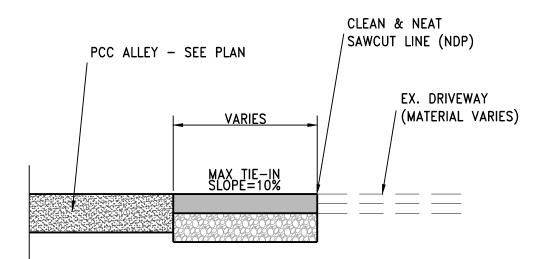
- 1. PCC PAVEMENT SHALL BE JOINTED AS SHOWN ABOVE FOR LONGITUDINAL JOINTS AND 10'-0" ON CENTER FOR TRANSVERSE JOINTS. DEVIATIONS FROM THIS LAYOUT MUST BE APPROVED BY THE ENGINEER. JOINTS TO BE CUT A MINIMUM OF 4 HOURS TO A MAXIMUM OF 12 HOURS AFTER CONCLUSION OF BRUSH FINISHING. SEE DETAIL A THIS SHEET.
- 2. CONTRACTOR TO POUR VALLEY GUTTER LIMITS AS SHOWN ON PLAN ABOVE FIRST AND SEPARATELY FROM REMAINING PCC WIDTH.

# PROPOSED SECTION OF IMPROVEMENT ALLEY "G"



#### NOTES:

- 1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC), AS ADOPTED BY CITY COUNCIL. CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS. PER CUBIC YARD. ALL MATERIALS SHALL CONFORM TO SPPWC, AS ADOPTED BY CITY COUNCIL.
- 2. ALL ADJACENT CONCRETE REMOVAL SHALL BE TO NEAT SAW CUT LINES AT RIGHT ANGLES. DOWEL INTO EXISTING ADJACENT CONCRETE DRIVEWAY APPROACH WITH (2) No. 4 REINFORCEMENT BARS EQUALLY SPACED ACROSS WIDTH "W". DOWELS SHALL PENETRATE A MINIMUM OF 4" INTO EXISTING



MATCH EX. ASPHALT OR MIN. 4" TYPE 3, WITH LIME. PG 64-22 PLANTMIX BITUMINOUS PAVEMENT. 50 BLOW WITH 3% VOIDS.

MATCH EX. BASE OR MIN. 6" TYPE 2, CLASS B AGGREGATE BASE AT 95% RELATIVE COMPACTION.

PERMANENT BITUMINOUS PAVEMENT PATCH BEHIND PCC ALLEY

# P.C.C. POST CURB

DRAWING No

S-113B

APPROVED BY: JE DATE: 1/2020

#### 4" MIN. AGGREGATE BASE COMPACTED TO 95% RELATIVE 6" MIN. AGGREGATE BASE COMPACTION -COMPACTED TO A MINIMUM 95% RELATIVE COMPACTION SECTION A-A GUTTER WEAKENED -PLANE JOINTS

PLAN F

SLOPE=50:1 MAX

SIDEWALK

GUTTER

PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC), AS ADOPTED BY CITY COUNCIL. CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS. PER CUBIC YARD. ALL MATERIALS SHALL CONFORM TO SSPWC, AS ADOPTED BY CITY COUNCIL.

SEE NOTE 5.

- . AGGREGATE BASE MATERIAL UNDER SIDEWALKS SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY COUNCIL.
- . SIDEWALK WIDTH "W" SHALL BE 4 FT MIN. WITH 60" PASSING SPACE EVERY 200' ON RESIDENTIAL STREETS AND 6 FT MIN. ON COLLECTOR AND ARTERIAL STREETS.
- WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT 5 FT INTERVALS AND ACCORDANCE WITH SECTION 312 OF THE SSPWC, AS ADOTED BY CITY COUNCIL.
- . ALL ADJACENT CONCRETE REMOVAL SHALL BE TO NEAT SAW CUT LINES AT RIGHT ANGLES TO NEW SIDEWALK. DOWEL INTO EXISTING ADJACENT CONCRETE SIDEWALK WITH A MINIMUM OF TWO (2) No. 4 REINFORCEMENT BARS EQUALLY SPACED ACROSS WIDTH "W". DOWELS SHALL PENETRATE A MINIMUM OF 4" INTO EXISTING CONCRETE.
- 6. SIDEWALKS SHALL NOT BE POURED MONOLITHICALLY WITH CURBS
- 7. TUNNELING AND/OR BORING IS NOT ALLOWED.

NOTES:

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
Sidewalk Detail	S-103
307	APPROVED BY: JE DATE: 1/2020

# AC PAVEMENT SURFACE 6" MIN. AGGREGATE BASE COMPACTED TO A MINIMUM 95% RELATIVE COMPACTION

PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI

MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH

MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES.

SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC), AS ADOPTED BY CITY COUNCIL.

GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE

2. THE SYNTHETIC MACROFIBER SHALL BE "TUF-STRAND SF" OR APPROVED EQUAL. MINIMUM FIBER

DOSAGE SHALL BE 5-6 LBS./CUBIC YARD AND TESTING SHALL ACHIEVE 650 PSI FLEXURAL

AGGREGATE BASE MATERIAL UNDER PCC ALLEY WAY SHALL BE TYPE 2, CLASS B CRUSHED

4. ALL ADJACENT CONCRETE REMOVAL SHALL BE TO NEAT SAW CUT LINES AT RIGHT ANGLES TO

5. ADJUSTMENT OF UTILITIES AND SURVEY MONUMENTS SHALL BE FLUSH WITH SLAB. UTILITIES

6. DOWELS SHALL BE CENTERED IN THE P.C.C. SECTION AND SHALL BE PLACED PARALLEL TO THE

7. DOWELS AND TIE BARS SHALL BE DRILLED AND EPOXIED INTO ADJACENT SLAB. EXPOSED END

OF DOWEL SHALL BE GREASED PRIOR TO POURING P.C.C. PAVEMENT. THE LENGTH OF THE

9. FLOW LINE SHALL BE CENTERED WHERE POSSIBLE, BUT MAY BE OFFSET TO IMPROVE DRAINAGE.

FLOWLINE MUST REMAIN A MINIMUM 1 FOOT CLEAR FROM LONGITUDINAL JOINTS AND 1 FOOT

EXPANSION JOINT WITH WHITE CAP OR BACKER ROD AND CAULK. THE PREMOLDED EXPANSION

CLOSED BACKER ROD AND CAULK. WITHIN ROADWAY, THE CAULK SHALL BE A DOW CORNING

880 - SL SELF LEVELING SILICONE JOINT SEALANT, INCRETE SYSTEMS POWDER COLOR DARK

12. CONCRETE REMOVAL SHALL BE TO AN EXISTING JOINT. PANELS SHALL BE FULL DEPTH SAWCUT

JOINT MATERIAL IS AN ASPHALT COATED FIBER EXPANSION JOINT, THE WHITE CAP/BACKER IS A

TOP OF THE CONCRETE SURFACE WITHIN A TOLERANCE OF  $\pm \frac{1}{16}$ " IN ONE FOOT.

DOWELS AND TIE BARS TO BE EMBEDDED FIFTEEN INCHES (15") INTO THE SLAB.

8. JOINTS TO BE CUT AT A MINIMUM OF 4 HOURS TO A MAXIMUM OF 12 HOURS AFTER THE

10. EXPANSION JOINTS AS SHOWN ON THE PLANS SHALL CONSIST OF A  $\frac{1}{2}$  INCH PREMOLDED

GRAY (4 LBS PER SACK) - MATCH FRENCH GRAY, OR APPROVED EQUAL.

11. FULLY WRAP POLES WITH MINIMUM 1/2" FLEXIBLE EXPANSION JOINT.

TO PROVIDE A CLEAN EDGE PRIOR TO REPLACING P.C.C. ALLEY.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION

SHALL BE A MINIMUM OF ONE FOOT AWAY FROM FLOW LINE.

AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY

ADDED TO THE P.C.C. AT 1.5 LBS. PER CUBIC YARD. ALL MATERIALS SHALL CONFORM TO

CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE

MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD

#### 1 RADIUS TO BE 1/2 INCH, OMIT ROUNDING IF CURBS ARE BACK TO BACK.

NOTES:

SSPWC, AS ADOPTED BY CITY COUNCIL.

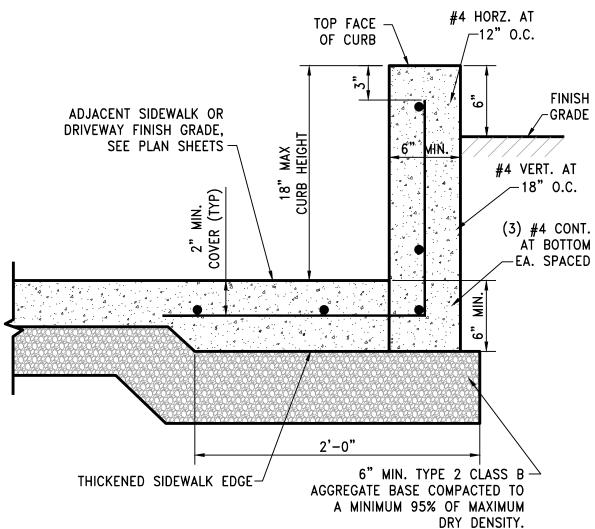
CONCLUSION OF BRUSH FINISHING.

MINIMUM CLEAR FROM EDGE OF UTILITIES.

NEW CONCRETE.

City of

- 2. FIBER-REINFORCED PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC). CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS. PER CUBIC YARD. ALL MATERIALS SHALL CONFORM TO SSPWC.
- 2. AGGREGATE BASE MATERIAL UNDER AND BEHIND CURB AND GUTTER SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION
- 3. WEAKENED PLANE JOINTS SHALL BE EVERY 10 FEET AND LOCATED ON THE BACK, TOP AND FACE OF THE CURB AND THE TOP OF THE GUTTER PAN.



#### NOTES:

- FIBER-REINFORCED PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC). CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS. PER CUBIC YARD. ALL MATERIALS SHALL CONFORM TO SSPWC.
- 2. AGGREGATE BASE MATERIAL UNDER AND BEHIND CURB AND GUTTER SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION
- 3. WEAKENED PLANE JOINTS SHALL MATCH SPACING OF ADJACENT SIDEWALK OR DRIVEWAY AND IN ACCORDANCE WITH SECTION 312 OF SSPWC.
- 4. SIDEWALK AND/OR DRIVEWAY SECTIONS MAY BE PLACED MONOLITHICALLY WITH POST CURB SECTIONS.

P.C.C. REINFORCED RETAINING CURB

SCALE: NTS

MEP / TDA **DESIGNED BY:** 10687.001

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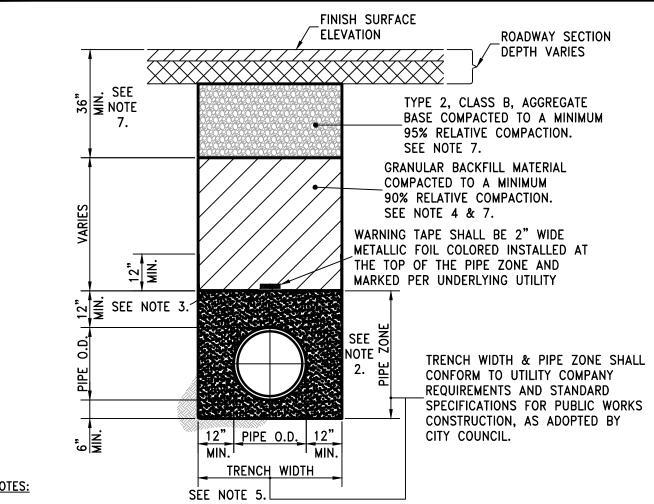
TDA AJG

CHECKED BY JOB NO.:

C101 P.C.C. DRIVEWAY TRANSITION

- WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC), AS ADOPTED BY CITY COUNCIL. CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS. PER CUBIC YARD. ALL MATERIALS SHALL CONFORM TO SSPWC, AS ADOPTED BY CITY COUNCIL.
- . REINFORCING STEEL SHALL BE GRADE 40 AND HAVE 1.5" CLEAR COVER.
- . CONCRETE STRUCTURE MAY BE A PRE-CAST CONCRETE UNIT. BASE OF PRE-CAST CONCRETE UNIT SHALL BE PLACED ON 6" COMPACTED DRAIN ROCK.
- 1. FRAME & GRATE SHALL BE D&L I-9226 OR APPROVED EQUAL.
- . CATCH BASIN SHALL BE TRAFFIC—RATED AND USED ONLY AT LOW POINTS IN ALLEYS OR PARKING AREAS.
- . ALL CATCH BASINS, PUBLIC OR PRIVATE, SHALL BE PROVIDED WITH A "SUR-TRAP" OIL/WATER SEPARATOR OR APPROVED EQUAL.

CATCH BASIN S-203 TYPE 3-R  APPROVED BY: JE I DATE: 1/2020	STANDARD DETAIL	S FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
TYPE 3-R  APPROVED BY: JE I DATE: 1/2020	City of	CATCH BASIN	S-203
INTRODUCTION OF THE PROPERTY AND A STATE OF THE PROPERTY A	Spurks	TYPE 3-R	APPROVED BY: JE DATE: 1/2020



- ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC), AS ADOPTED BY CITY COUNCIL.
- BEDDING MATERIAL SHALL CONFORM TO OWNING-UTILITY COMPANY REQUIREMENTS AS APPROVED BY THE CITY OF SPARKS. FOR CITY-OWNED UTILITIES, BEDDING MATERIAL SHALL BE CLASS A OR C, COMPACTED TO MINIMUM 90% RELATIVE COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY COUNCIL.
- CLASS C BEDDING REQUIRES INSTALLATION OF GEOTEXTILE FABRIC BETWEEN PIPE ZONE AND BACKFILL MATERIAL. GEOTEXTILE FABRIC SHALL BE MIRAFI 180N OR APPROVED EQUAL.
- BACKFILL MATERIAL SHALL BE TYPE 2, CLASS B OR CLASS E AND COMPACTED TO MINIMUM 90% RELATIVE COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY COUNCIL.
- ALL EXCAVATIONS SHALL CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.
- EXISTING PIPE TO BE ABANDONED SHALL BE GROUT FILLED OR COMPLETELY REMOVED.
- MINIMUM BACKFILL DEPTH REQUIREMENT IS FOR TRENCHING IN EXISTING PAVED STREETS. TRENCHING FOR <u>NEW DEVELOPMENT</u> WHERE STREETS HAVE NOT YET BEEN CONSTRUCTED, BACKFILL MATERIAL SHALL BE TYPE 2, CLASS B OR CLASS E AND COMPACTED TO MINIMUM 90% RELATIVE COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY COUNCIL.

STANDARD DETAI	LS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.	
City of	TRENCH	S-117	
sparks	EXCAVATION/BACKFILL	APPROVED BY: JE DATE: 1/2020	

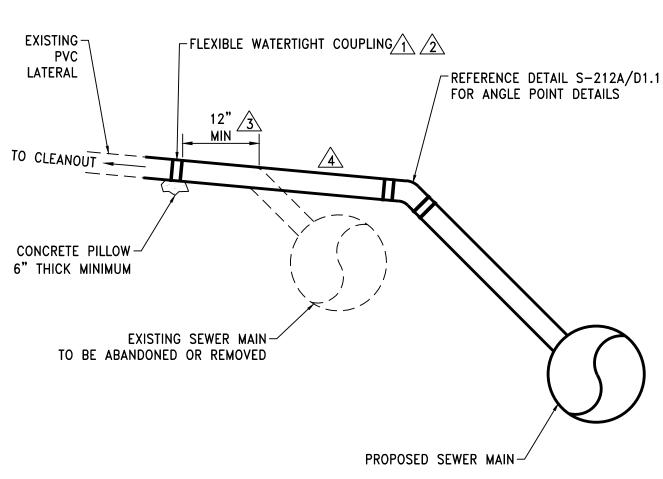
## - VARIES -6" CURB STANDARD WYE OR TEE, OR CUT-IN CONNECTION. CUT-IN CONNECTIONS SHALL BE CORE DRILLED & INSTALL APPROVED TAP SADDLE TYPE OR INSERTA TEE TYPE LATERAL CONNECTION. SEWER MAIN STAMPED OR CHISELED IN TOP OF CURB NOT LESS THAN 1 1/2" HIGH & 3/16" DEEP, UNLESS ALTERNATE LOCATION REQ'D BY AGENCY (NOTE 6). \_4x4 POST, TEE BRANCH 20 FLUSH WITH IN RIGHT-OF-WAY OR - EASEMENT, LATERAL SHALL BE PVC SDR-35 OR C-900

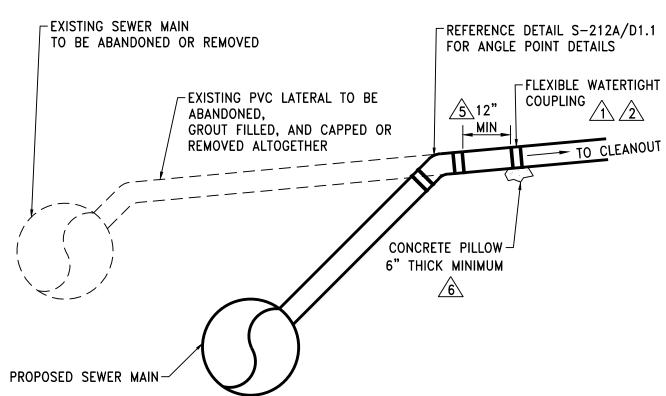
- 1. SEWER LATERALS SHALL HAVE A MINIMUM SLOPE OF 2%, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- 2. LATERAL SHALL BE CUT BACK TO SOUND MATERIAL FOR COUPLING.
- 3. ALL CONNECTIONS TO THE CITY SEWER MAINS MUST BE CORE DRILLED.
- 4. ENCASE LATERAL CONNECTION IN CEMENT, STABILIZED SAND OR 2000 PSI CONCRETE
- FOLLOWING INSTALLATION. CONNECTION MUST BE INSPECTED BY CITY PRIOR TO BACKFILL. 5. NO LATERAL CONNECTIONS SHALL BE MADE TO SANITARY SEWER "INTERCEPTOR" LINES
- WITHOUT THE APPROVAL OF THE CITY ENGINEER. 6. ALL APPLICABLE SANITARY SEWER PIPE INSTALLATION WORK SHALL BE IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE.

STANDARD DETAIL	LS FOR PUBLIC WORKS CONSTRUCTION	DRAWING	No.
City of Darks	SANITARY SEWER LATERAL	S-212	2A
		APPROVED BY: JE	DATE: 1/2020

- SEWER LATERALS SHALL HAVE A MINIMUM PIPE DIAMETER OF 4-INCHES.
- ALL PLASTIC PIPE USED FOR SEWER SERVICE LATERAL CONSTRUCTION SHALL BE SOLID WALL AND SHALL MEET THE REQUIREMENTS OF D-2412, HAVE A MINIMUM STIFFNESS OF 46 PSI AS DEFINED BY THE REQUIREMENTS OF ASTM D-3034.
- SERVICE LATERALS SHALL HAVE A MINIMUM SLOPE OF 1/4-INCH PER FOOT UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- SEWER LATERALS SHALL HAVE A MINIMUM COVER OF 36-INCHES IN THE PUBLIC RIGHT-OF-WAY AND IN EASEMENTS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. THE DEFINITION OF "COVER" IS THE DISTANCE FROM THE TOP OF PIPE TO FINISHED GRADE.
- USE OF SEWER SERVICE TAP SADDLE CONNECTIONS SHALL NOT BE ALLOWED FOR NEW SEWER MAIN CONSTRUCTION. WHEN A TAP SADDLE CONNECTION IS TO BE USED ON AN EXISTING SEWER MAIN, IT SHALL BE A WYE SADDLE AND BE INSTALLED PER DETAIL S-212C.
- SEWER LATERALS SHALL HAVE A CLEANOUT INSTALLED BETWEEN SIDEWALK AND RIGHT-OF-WAY. A G5 BOX CLEARLY MARKED "SEWER" SHALL BE INSTALLED OVER THE TOP OF THE CLEANOUT RISER CAP PIPE.
- 7. SEWER LATERALS SHALL NOT BE CONNECTED DIRECTLY TO OR WITHIN 5-FEET OF A MANHOLE
- 8. EXISTING SEWER LATERALS SHALL BE CUT BACK TO SOUND MATERIAL FOR COUPLING. PLACE 6-INCH THICK CONCRETE PAD UNDER CONNECTION.
- SEWER LATERAL CONNECTION SHALL BE STABILIZED WITH APPROVED MATERIAL FOLLOWING INSTALLATION. CONNECTION TO CITY SEWER MAIN MUST BE INSPECTED BY THE CITY PRIOR TO
- 10. NO LATERAL CONNECTIONS SHALL BE MADE DIRECTLY TO A SANITARY SEWER "INTERCEPTOR" UNLESS APPROVED BY THE CITY ENGINEER.
- 11. SEWER LATERALS SHALL NOT BE CONNECTED TO A SEWER MAIN UNLESS THE CONNECTION POINT IS BETWEEN TWO MANHOLE STRUCTURES.
- 12. EACH INDIVIDUAL PARCEL SHALL HAVE A MINIMUM OF ONE SEWER LATERAL. TWO OR MORE PARCELS SHALL NOT SHARE ONE SEWER LATERAL.
- 13. SANITARY SEWER LATERAL IDENTIFICATION AND LOCATING REQUIREMENTS SHALL BE PER SPARKS MUNICIPAL CODE 17.16.130 (SMC 17.16.130).
- 14. DISCONTINUANCE OF USE OF AN EXISTING SEWER LATERAL REQUIRES ABANDONMENT OF THE LATERAL. CUT, REMOVE 1-FOOT OF EXISTING LATERAL AND CAP BOTH ENDS OF THE EXISTING SEWER LATERAL TO BE ABANDONED WITHIN 6-INCHES OF THE SEWER MAIN. ABANDONMENT MUST BE INSPECTED BY CITY PRIOR TO BACKFILL.
- 15. PROPERTY OWNER SHALL BE RESPONSIBLE FOR OPERATION, MAINTENANCE AND REPAIR OF THE SEWER LATERAL WITHIN THE PUBLIC RIGHT-OF-WAY PER SPARKS MUNICIPAL CODE.

STANDARD DETAI	LS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.	
City of Darks	NOTES - SANITARY SEWER	S-212B	
		APPROVED BY: JE DATE: 1	/2020





WAY BACK TO THE CLEANOUT.

1. RC5000 STRONG BACK COUPLING OR APPROVED EQUAL SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.

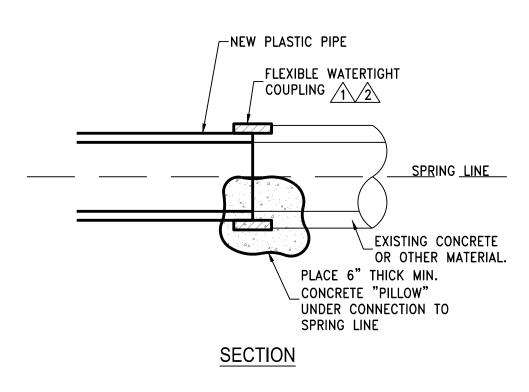
2 CONTRACTOR TO VERIFY OUTSIDE DIAMETER OF EXISTING PIPE AND PROVIDE PROPER FLEXIBLE WATERTIGHT COUPLINGS. IF CIPP IS ENCOUNTERED, EPOXY LINER AT END OF PIPE.

 $\sqrt{3}$  CONTRACTOR TO CONNECT THE NEW LATERAL TO THE EXISTING LATERAL A MINIMUM OF 12" FROM THE ANGLE POINT OF THE EXISTING LATERAL.

/4\ THE NEW LATERAL EXTENSION SHALL MAINTAIN SIMILAR SLOPE AS THE EXISTING LATERAL UNTIL THE ANGLE POINT TO THE NEW MAIN. ADJUSTMENTS MAY BE NECESSARY IF UTILITY CONFLICTS EXIST.

 $\sqrt{5}$  Contractor shall extend connection to existing lateral a minimum of 12" beyond the New ANGLE POINT.

 $\sqrt{6}$  concrete pillow does not need to be placed if a new lateral is constructed all the

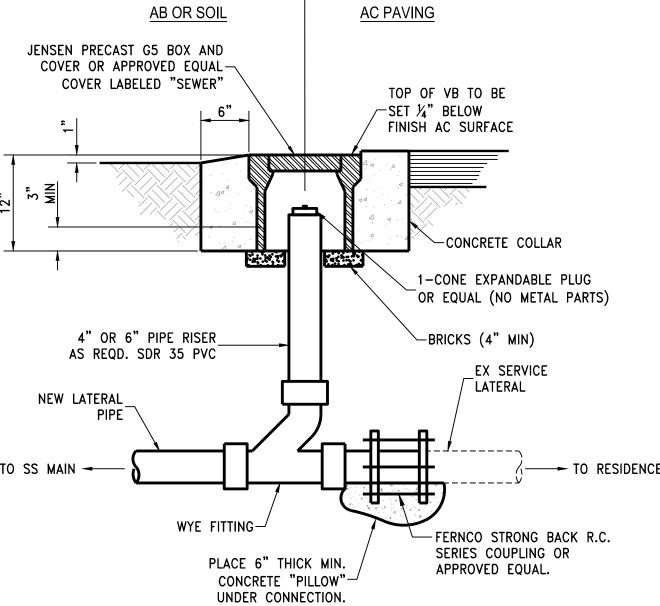


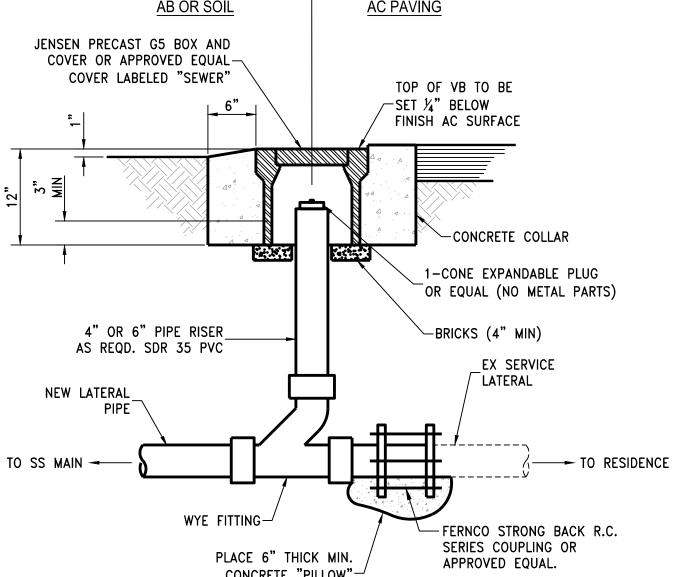
#### NOTES:

SCALE: NTS

1 RC5000 STRONG BACK COUPLING OR APPROVED EQUAL SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.

2 CONTRACTOR TO VERIFY OUTSIDE DIAMETER OF EXISTING PIPE AND PROVIDE PROPER FLEXIBLE WATERTIGHT COUPLINGS. IF CIPP IS ENCOUNTERED, EPOXY LINER AT END OF PIPE.





EXISTING PVC LATERAL EXTENSION AND CONNECTION TO NEW MAIN

\EXISTING PIPE TO NEW PVC PIPE CONNECTION

LATERAL CLEANOUT DETAIL

SCALE: NTS

DRAWN BY: **DESIGNED BY:** CHECKED BY JOB NO.:

BE USED FOR ANY PROJECT OTHER THAN THE PROJECT FOR WHICH IT WAS PREPARED.

9222 PROTOTYPE DRIVE

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INFO@LUMOSINC.COM

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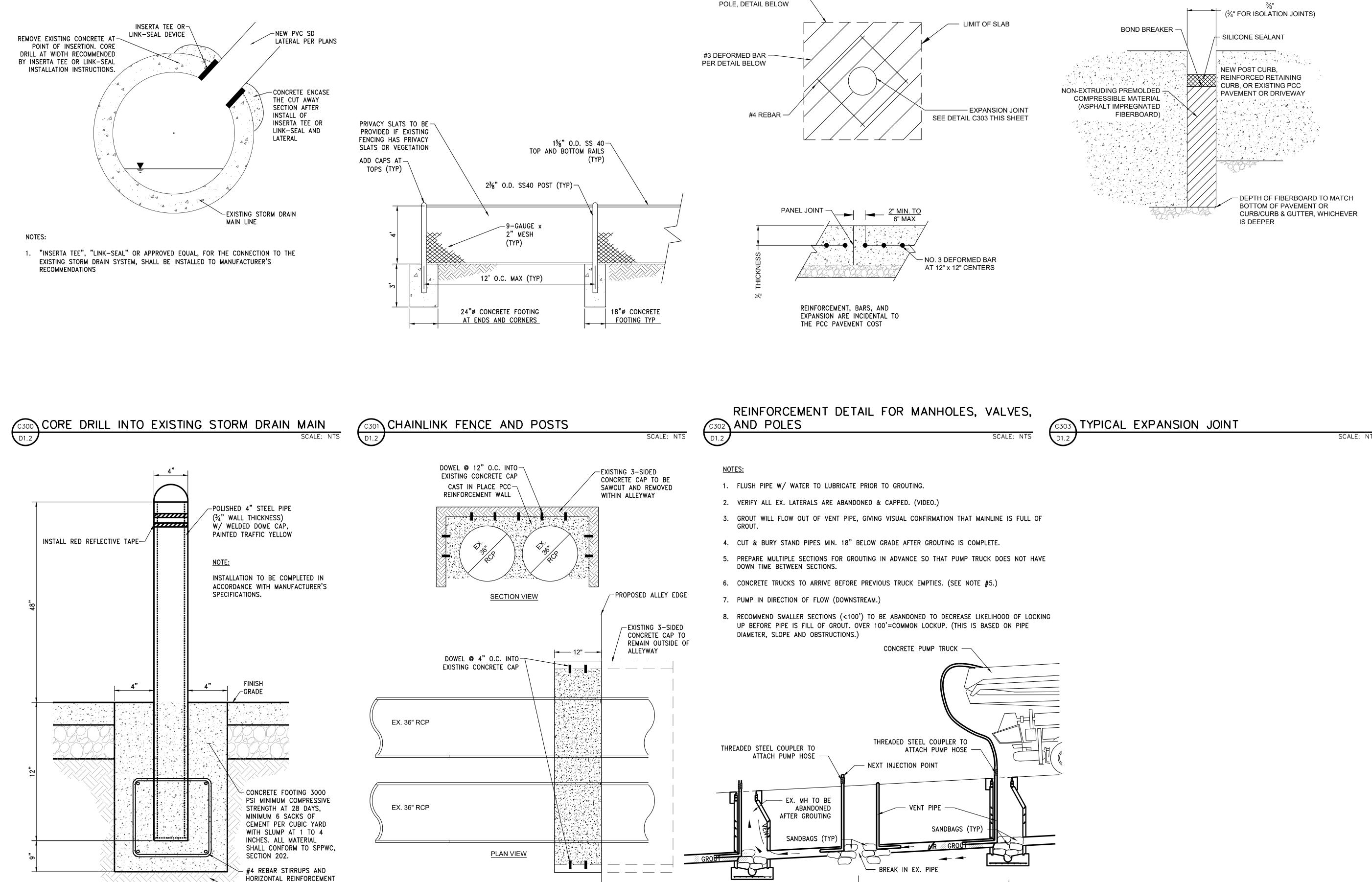
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MEP / TDA AJG 10687.001



- COMPACTED SUBGRADE

4" DIAMETER BOLLARD

3-SIDED CONCRETE CAP REINFORCEMENT WALL

■ APPROX. 150' (MAX.) ■ ■

(SHORTER FOR LARGE DIA. PIPES)

SCALE: NTS

PIPE ABANDONMENT WITH GROUT

REINFORCE PANEL -

ADJACENT TO MANHOLE, VALVE, BOX, OR POWER

9222 PROTOTYPE DRIVE RENO, NV 89521 TEL: 775.827.6111

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**PROGRAM REHABILITATION** 

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